Mr. Patrick S. Goveia
Parker Hannifin Powertrain
703 E. Kircher
Goshen, Indiana 46526

Re: Exempt Construction and Operation Status,
039-13559-00006

Dear Mr. Goveia:

The application from Parker Hannifin Powertrain, received on December 5, 2000, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-1.1-3, it has been determined that the following construction and operation of a stationary rubber product manufacturing source to be located at 703 E. Kircher, Goshen, Indiana, is classified as exempt from air pollution permit requirements:

The source consists of the following new facilities/units:

(a) One (1) warm up mill, with a maximum capacity of 230 pounds of rubber per hour.

(b) One (1) rubber product compression molding operation, consisting of twenty (20) electric presses, with a maximum combined capacity of 223 pounds of rubber per hour and 110 pounds of metal inserts per hour.

(c) One (1) deflashing unit, with a capacity of 330 pounds per hour.

(d) One (1) spray booth, equipped with air brush spray equipment, equipped with dry filters for air pollution control, with a maximum capacity of 330 pounds of finished rubber products per hour.

(e) Nine (9) natural gas-fired forced air heaters, known as HR1 through HR9, rated at 0.40 million British thermal units per hour, each.

The following conditions shall be applicable:

(1) Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemption Alternative Opacity Limitations), opacity shall meet the following:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuos opacity monitor in a six (6) hour period.

(2) Pursuant to 326 IAC 6-3-2 (Process Operations), the particulate matter (PM) overspray from surface coating facilities shall be limited by the following:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10 P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

Compliance with this rule is shown by use of dry filters for overspray control.

This exemption is the first air approval issued to this source.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Management (OAM) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Original signed by
Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

PTB/MES
cc: File - Elkhart County
Elkhart County Health Department
Air Compliance - Greg Wingstrom
Northern Regional Office
Permit Tracking - Janet Mobley
Air Programs Section - Michele Boner

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for an Exempt Construction and Operation

Source Background and Description

Source Name:	**Parker Hannifin Powertrain**
Source Location:	**703 E. Kercher, Goshin, Indiana 46526**
County:	**Elkhart**
SIC Code:	**3061**
Operation Permit No.:	**039-13559-00006**
Permit Reviewer:	**Patrick Brennan/MES**

The Office of Air Quality (OAQ) has reviewed an application from Parker Hannifin Powertrain relating to the construction and operation of a stationary rubber product manufacturing source.

The source consists of the following emission units and pollution control devices:

Permitted Emission Units and Pollution Control Equipment

There are no permitted facilities operating at this source during this review process.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

New Emission Units and Pollution Control Equipment

(a) One (1) warm up mill, with a maximum capacity of 230 pounds of rubber per hour.

(b) One (1) rubber product compression molding operation, consisting of twenty (20) electric presses, with a maximum combined capacity of 223 pounds of rubber per hour and 110 pounds of metal inserts per hour.

(c) One (1) deflashing unit, with a capacity of 330 pounds per hour.

(d) One (1) spray booth, equipped with air brush spray equipment, equipped with dry filters for air pollution control, with a maximum capacity of 330 pounds of finished rubber products per hour.

(e) Nine (9) natural gas-fired forced air heaters, known as HR1 through HR9, rated at 0.40 million British thermal units per hour, each.

Existing Approvals

There are no existing approvals for this source.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the exemption be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on December 5, 2000, with additional information received on April 16 and May 18, 2000.

Emission Calculations

See pages 1 through 3 of 3 of Appendix A of this document for detailed emissions calculations from surface coating and natural gas combustion.

The source also has VOC and HAPs emissions from compression molding of rubber parts. Emissions from this process have been calculated using factors from draft AP-42, Section 4.12, Manufacture of Rubber Products. The compression molding process uses Paracryl BLT (NBR), identified as Compound 14 in Section 4.12. Emission factors for this compound are 5.3E-4 pounds of VOC per pound of rubber processed, and 1.03E-3 pounds of HAPs per pound of rubber processed. The calculated emissions are as follows:

Total VOC PTE = 5.30E-4 lbs VOC/lb of rubber x 233 pounds of rubber/hr = 0.118 lb/hr
= 0.518 TPY

Total HAPs PTE = 1.03E-3 lbs HAP/lb of rubber x 233 pounds of rubber/hr = 0.230 lb/hr
= 1.006 TPY

The warm up mill and the deflashing unit have zero emissions, but were included in the equipment list at the request of the applicant.

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency.”

Pollutant	Potential To Emit (tons/year)
PM	0.181
PM_{10}	0.181
SO_2	0.009
VOC	0.798
CO	1.325
NOx	1.557
Total HAPs	1.035

The potential to emit (as defined in 326 IAC 2-5.1-2) of PM_{10} is less five (5) tons per year, the potential to emit of SO_2, NO_X and VOC are less than ten (10) tons per year, the potential to emit of CO is less than twenty-five (25) tons per year, the potential to emit of a single HAP is less than one (1) ton per year and the potential to emit of a any combination of HAPs is less than two and one half (2.5) tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-5.1-2. Based on the data submitted and the provisions in 326 IAC 2-1.1-3, it has been determined that this construction and operation of this rubber product manufacturing source is classified as exempt from air pollution permit requirements.

Actual Emissions

No previous emission data has been received from the source.

County Attainment Status

The source is located in Elkhart County.

Pollutant	Status
PM_{10}	attainment
SO_2	attainment
NO_2	attainment
Ozone	maintenance
CO	attainment
Lead	attainment

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC and NO_X emissions are considered when evaluating the rule applicability relating to the ozone standards. Elkhart County has been designated as maintenance or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Elkhart County has been classified as attainment or unclassifiable for the remaining criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Source Status

New Source PSD Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	**Emissions** (tons/yr)
PM	0.181
PM_{10}	0.181
SO_2	0.009
VOC	0.798
CO	1.325
NO_X	1.557
Combination HAPs	1.035

(a) This new source is **not** a major stationary source because no attainment pollutant is emitted at a rate of 250 tons per year or greater and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2, and 40 CFR Part 52.21, the PSD requirements do not apply.

(b) Fugitive Emissions

Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2, 40 CFR 52.21, or 326 IAC 2-3 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This new source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

(a) each criteria pollutant is less than one hundred (100) tons per year,

(b) a single hazardous air pollutant (HAP) is less than ten (10) tons per year, and

(c) any combination of HAPs is less than twenty-five (25) tons per year.

This is the first air approval issued to this source.

Federal Rule Applicability

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.

(b) This source is not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.540), Subpart BBB, because the source is not manufacturing rubber tires.

(c) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14, 326 IAC 20, 40 CFR Part 61 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 2-4.1-1 (New Source Toxics Control)

The potential to emit of each individual HAP is less than ten (10) tons per year and the potential to emit of total HAPs is less than twenty-five (25) tons per year. Therefore, the requirements of 326 IAC 2-4.1-1, new source toxics control, are not applicable.

326 IAC 2-6 (Emission Reporting)

This source is located in Elkhart County and the potential to emit of VOC and NO_X is less than ten (10) tons per year, therefore, 326 IAC 2-6 does not apply.

326 IAC 5-1 (Opacity)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary alternative opacity limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

326 IAC 6-3-2 (Process Operations)

The particulate matter (PM) overspray surface coating facilities shall be limited by the following:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

Compliance with this rule is shown by use of dry filters for overspray control.

326 IAC 8-1-6 (BACT)

Because the surface coating operations apply coatings to rubber substrates, 326 IAC 8-1-6 could be applicable. However, because potential VOC emissions from surface coating are below 25.0 TPY, this rule does not apply.

Conclusion

The construction and operation of this rubber product manufacturing source shall be subject to the conditions of the attached proposed Exemption 039-13559-00006.

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations

Company Name: **Parker Hannafin Powertrain**
Address City IN Zip: **703 E.Kercher, Goshin, Indiana 46526**
CP: **039-13559**
Plt ID: **039-00006**
Reviewer: **Patrick Brennan/MES**
Date: **December 5, 2000**

Material	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
Phthalo Blue R	8.70	62.10%	0.0%	62.1%	0.0%	37.90%	0.00011	1.000	5.40	5.40	0.001	0.015	0.003	0.001	14.26	50%
Black-Out White	7.75	84.00%	0.0%	84.0%	0.0%	16.00%	0.00011	1.000	6.51	6.51	0.001	0.018	0.003	0.000	40.69	50%
Yellow Oxide	13.70	61.00%	0.0%	61.0%	0.0%	39.00%	0.00500	1.000	8.36	8.36	0.042	1.003	0.183	0.059	21.43	50%
Bon Red	8.90	64.00%	0.0%	64.0%	0.0%	36.00%	0.00003	1.000	5.70	5.70	0.000	0.004	0.001	0.000	15.82	50%
Phthalo Green B	9.40	68.00%	0.0%	68.0%	0.0%	32.00%	0.00011	1.000	6.39	6.39	0.001	0.018	0.003	0.001	19.98	50%
Acetone	6.59	100.00%	100.0%	0.0%	0.0%	0.00%	0.02500	1.000	0.00	0.00	0.000	0.000	0.000	0.000	ERR	0%
State Potential Emissions			**Add worst case coating to all solvents**								**0.044**	**1.057**	**0.193**	**0.061**		

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Industrial Boiler

Company Name: **Parker Hannafin Powertrain**
Address City IN Zip: **703 E.Kercher, Goshin, Indiana 46526**
CP: **039-13559**
Plt ID: **039-00006**
Reviewer: **Patrick Brennan/MES**
Date: **December 5, 2000**

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
3.6	31.5

Pollutant

	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100.0 *see below	5.5	84.0
Potential Emission in tons/yr	0.120	0.120	0.009	1.577	0.087	1.325

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32
PM emission factors are condensable and filterable.

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
See page 2 for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Industrial Boiler
HAPs Emissions

Company Name:
Address City IN Zip:
CP:
Plt ID:
Reviewer:
Date:

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	0.000	0.000	0.001	0.028	0.000

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	0.000	0.000	0.000	0.000	0.000

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.